@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 1010262A

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Completed by:

V. Belitsky	Vera Belitsky/ Document Control	10/27/10
(Signature)	(Print Name & Title)	(Date)

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 1010262A

Work Order Summary

CLIENT:	Mr. Brian Baker Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494	**BILL TO:**	Accounts Payable Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494
PHONE:	800-825-5343	**P.O. #**	17314
FAX:	781-247-4305	**PROJECT #**	17314
DATE RECEIVED:	10/13/2010	**CONTACT:**	Ausha Scott
DATE COMPLETED:	10/26/2010		

FRACTION #	NAME	TEST
01A	116171	ATL Applications
02A	116172	ATL Applications
03A	116173	ATL Applications
04A	116174	ATL Applications
05A	116175	ATL Applications
06A	116176	ATL Applications
07A	Lab Blank	ATL Applications
07B	Lab Blank	ATL Applications
08A	LCS	ATL Applications

CERTIFIED BY: Linda J. Furman DATE: 10/26/10

Laboratory Director

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Hydrogen Sulfide by Radiello 170
Environmental Health & Engineering, Inc.
Workorder# 1010262A

Six Radiello 170 (H2S) samples were received on October 13, 2010. The procedure involves adsorption of H2S by zinc acetate to form zinc sulfide. The sulfide is then recovered by extraction with water and addition of ferric chloride in a strongly acidic solution to produce methylene blue. Methylene blue absorbance is then measured at 665 nm using a spectrophotometer. Results are reported in uG and uG/m3.

Sampling rate of 69 mL/min for H2S was provided by the manufacturer.

Receiving Notes

Sample collection date was not provided on the Chain of Custody for samples116171, 116172, 116173, 116174, 116175 and 116176. The client was contacted and a date of 9/28/10 was provided.

Analytical Notes

Results were calculated based on 25 deg C without temperature correction. The actual exposure time was used to calculate sample concentrations and reporting limits.

An exposure time of 19805 minutes was used for the QC samples and trip blanks.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Sample Results and Raw Data

AIR TOXICS LTD.

ATL Application # 59 for RAD 170 (Hydrogen Sulfide)

Spectrophotometer

Field Sample I.D.	Lab Sample I.D.	Collection Date	Analysis Date	Dilution Factor	Reporting Limit (ug)	Reporting Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
116171	1010262A-01A	NA	10/18/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
116172	1010262A-02A	NA	10/18/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
116173	1010262A-03A	NA	10/18/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
116174	1010262A-04A	NA	10/18/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
116175	1010262A-05A	NA	10/18/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
116176	1010262A-06A	NA	10/18/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
Method Blank	1010262A-07A	NA	10/18/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
Method Blank	1010262A-07B	NA	10/18/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
								%Rec
LCS	1010262A-08A	NA	10/18/2010	1.00	**0.80**	**0.55**		**128**

COMMENTS: 1. NA=Not Applicable
2. ND=Not Detected
3. Exposure time of 19805 minutes was assumed for the QC samples.
4. Background subtraction not performed.

Hydrogen Sulfide Radiello Calculation Worksheet

Workorder #:	1010262A	
Sampling Rate (ng/ppb.min)	0.096	Typically0.096 for H2S
Sampling T (deg C)	25	Typically 25
Volume (mL)	10.5	Typically 10.5 for H2S
Date of Analysis:	10/18/2010	
Corrected Q	0.096	Takes into account temp

Q includes conversion from Sulfide to H2S

T Corrected, no Blank correction

LabSampleID	Client	Date of Collection	Abs	Duration (min)	DF	Conc (ug/mL) of sulfide	Conc (ug) of sulfide	Conc (ug) of H2S	Conc (ppb) of H2S	Conc (ug/m3) of H2S
						(Abs-Y-int)xDF / Slope	Conc(ug/mL)xVol (mL)	conc (ug sulfide) *MW H2S / MW Sulfide	Conc (ug) x 1000 / Q x Duration	ppbx mw / 24.45
49A	115813	NA	0.091	18540	1.00	0.048396469	0.508162929	0.540043934	0.286	0.398
50A	115814	NA	0.118	18540	1.00	0.073821482	0.775125563	0.823755205	0.436	0.607
51A	115815	NA	0.123	18540	1.00	0.078529818	0.824563087	0.876294329	0.463	0.646
52A	115816	NA	0.131	18540	1.00	0.086063155	0.903663127	0.960356928	0.508	0.708
53A	115817	NA	0.029	18540	1.00	-0.009986893	-0.104862377	-0.111441207	-0.059	-0.082
54A	115818	NA	0.026	18540	1.00	-0.012811894	-0.134524891	-0.142964682	-0.076	-0.105
54AA	115818 Lab Duplicate	NA	0.025	18540	1.00	-0.013753562	-0.144412396	-0.153472507	-0.081	-0.113
01A	116171	NA	0.04	19805	1.00	0.000371445	0.003900178	0.004144866	0.002	0.003
02A	116172	NA	0.039	19805	1.00	-0.000570222	-0.005987327	-0.006362959	-0.003	-0.004
03A	116173	NA	0.05	19805	1.00	0.009788117	0.102775227	0.109223115	0.054	0.075
04A	116174	NA	0.035	19805	1.00	-0.00433689	-0.045537347	-0.048394258	-0.024	-0.033
05A	116175	NA	0.021	19805	1.00	-0.01752023	-0.183962416	-0.195503806	-0.097	-0.135
06A	116176	NA	0.021	19805	1.00	-0.01752023	-0.183962416	-0.195503806	-0.097	-0.135
					1.00	-0.03729524	-0.39160002	-0.416168128	#DIV/0!	#DIV/0!
					1.00	-0.03729524	-0.39160002	-0.416168128	#DIV/0!	#DIV/0!
					1.00	-0.03729524	-0.39160002	-0.416168128	#DIV/0!	#DIV/0!
					1.00	-0.03729524	-0.39160002	-0.416168128	#DIV/0!	#DIV/0!
					1.00	-0.03729524	-0.39160002	-0.416168128	#DIV/0!	#DIV/0!
					1.00	-0.03729524	-0.39160002	-0.416168128	#DIV/0!	#DIV/0!
					1.00	-0.03729524	-0.39160002	-0.416168128	#DIV/0!	#DIV/0!
					1.00	-0.03729524	-0.39160002	-0.416168128	#DIV/0!	#DIV/0!
					1.00	-0.03729524	-0.39160002	-0.416168128	#DIV/0!	#DIV/0!
07A	Method Blank	NA	0.026	19805	1.00	-0.012811894	-0.134524891	-0.142964682	-0.071	-0.099
07B	Method Blank	NA	0.027	19805	1.00	-0.011870227	-0.124637387	-0.132456857	-0.066	-0.091
08A	LCS	NA	0.221	19805	1.00	0.170813197	1.793538571	1.906061165	0.943	1.315

QC Duration	CCV Spike Amt
19805	0.133

Verified: HH and AW on 9/4/09

Q includes conversion from Sulfide to H2S

Low PointxDF	RL(ug/mL)xVol (mL)	RL (ug sulfide) *MW H2S / MW Sulfide	RL (ug) x 1000 / Q x Duration	ppbx mw / 24.45					Calibration Data		Calibration Date 10/18/2010	Linear Regression
					T Corrected, no Blank correction							
RL(ug/ml) of sulfide	RL (ug) of sulfide	RL (ug) of H2S	RL (ppb) of H2S	RL (ug/m3)	Result (ug) H2S	Result (ug/m3) H2S	Result (ppb) H2S	%Rec	ug/ml of sulfide	absorbance		
0.072	0.752	0.798966249	0.42	0.589	ND	ND	ND		0	0	Slope	1.061946373
0.072	0.752	0.798966249	0.42	0.589	0.823755205	0.60706795	0.435502946		0.0716	0.097	Y-int	0.039605545
0.072	0.752	0.798966249	0.42	0.589	0.876294329	0.645786757	0.463279333		0.143	0.18	R2	0.997358126
0.072	0.752	0.798966249	0.42	0.589	0.960356928	0.707736848	0.507721552		0.286	0.356		
0.072	0.752	0.798966249	0.42	0.589	ND	ND	ND		0.572	0.683		
0.072	0.752	0.798966249	0.42	0.589	ND	ND	ND		1.145	1.237		
0.072	0.752	0.798966249	0.42	0.589	ND	ND	ND					
0.072	0.752	0.798966249	0.40	0.551	ND	ND	ND					
0.072	0.752	0.798966249	0.40	0.551	ND	ND	ND					
0.072	0.752	0.798966249	0.40	0.551	ND	ND	ND					
0.072	0.752	0.798966249	0.40	0.551	ND	ND	ND					
0.072	0.752	0.798966249	0.40	0.551	ND	ND	ND					
0.072	0.752	0.798966249	0.40	0.551	ND	ND	ND					
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!					
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!					
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!					
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!					
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!					
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!					
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!					
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!					
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!					
0.072	0.752	0.798966249	0.40	0.551	ND	ND	ND					
0.072	0.752	0.798966249	0.40	0.551	ND	ND	ND	%Rec				
0.072	0.752	0.798966249	0.40	0.551	1.906061165	1.314954876	0.943332161	128				

QC Results and Raw Data

Spectrophotometer Logbook **@Air Toxics Ltd.** **Logbook#: 1927**

Work Order: 1010262A/1902690 **Date:** 10/18/10 **Method:** Rad 170

Analyst: M. Skidmore **Wavelength:** 665nm

Standard ID	Concentration	ABS
	sulfide (µg/mL)	
Level 1 1993-80-E	0.0716	0.097
Level 2 -D	0.143	0.180
Level 3 -C	0.286	0.356
Level 4 -B	0.572	0.683
Level 5 -A	1.145	1.237
ICV 1993-81	0.286	0.345

r = 0.9974
m = 1.062
b = 0.0396

ICV % Recovery = 101

Fraction	Dilution	ABS MJS 10/19/10	Sample ID	Sample Volume	Comments
01A	1.00	0.094 ~~0.040~~	116171	10.5mL	
02A		~~0.118~~ 0.039	116172		
03A		0.050	116173		
04A		0.035	116174		
05A		0.021	116175		
06A		0.021	116176		
49A		0.091	115813		
50A		0.118	115814		
51A		0.123	~~118~~ 115815		
52A		0.131	115816		
53A		0.029	115817		
54A		0.026	115818		
54AA		0.025	↓		
BLK1		0.026	N/A		Lot: 10101
BLK2		0.027	↓		↓
LCS		0.221	↓		0.133 µg/mL
CCV		0.361	↓	↓	0.286 µg/mL
					MJS 10/19/10

Procedure:

1.) Add 10 mL of H_2O to sample tube, cap and vortex for 1 minute.
2.) Add 0.5 mL of Ferric Chloride-Amine solution and cap immediately.
3.) Allow color to develop for 30 minutes.
4.) Measure absorbance at 665nm.

MJS 10/19/10

Signed

10/19/10
Date

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-80
Project: Rad 170 calibration Curve
Analyst: M. Skidmore
Preparation Date: 10/18/10
Expiration Date: 10/18/10

Solvent: HPLC H_2O
Solvent Lot #: DB 270

Procedure/Comments:

Solution A: 2 mL of Code Rad 171 (1476-1736, exp 2/3/11) (located in ER1B) with 98 mL of D.I. H_2O = 1.145 µg/mL

Solution B: 2.5 mL of Solution A with 2.5 mL of D.I. H_2O = 0.572 µg/mL

Solution C: 1.25 mL of Solution A with 3.75 mL of D.I. H_2O = 0.286 µg/mL

Solution D: 0.625 mL of Solution A with 4.375 mL of D.I. H_2O = 0.143 µg/mL

Solution E: 0.375 mL of Solution A with 5.625 mL of D.I. H_2O = 0.0716 µg/mL

Note: Each solution was measured immediately after it was prepared. Solution A is only stable in the flask it was prepared in.

MJS 10/18/10

10/18/10

Signed 10/22/10 Reviewed 10/22/10

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-81 MJS 10/18/10
Project: Rad 170 ICV
Analyst: FM
Preparation Date: 10/18/10
Expiration Date: 10/18/10

Solvent: HPLC water
Solvent Lot #: DB270

Procedure/Comments:

Solution A: 2 mL of Code Rad 171 (1476-1736, exp 2/3/11) (located in ER1B) with 98 mL of D.I. H_2O = 1.145 µg/mL

Solution C: 1.25 mL of Solution A with 3.75 mL of D.I. H_2O = 0.286 µg/mL

Note: Each solution was measured immediately after it was prepared. Solution A is only stable in the flask it was prepared in.

MJS 10/18/10

MJS 10/18/10

FM 10/18/10 Signed Date

Reviewed 10/18/10 Date

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

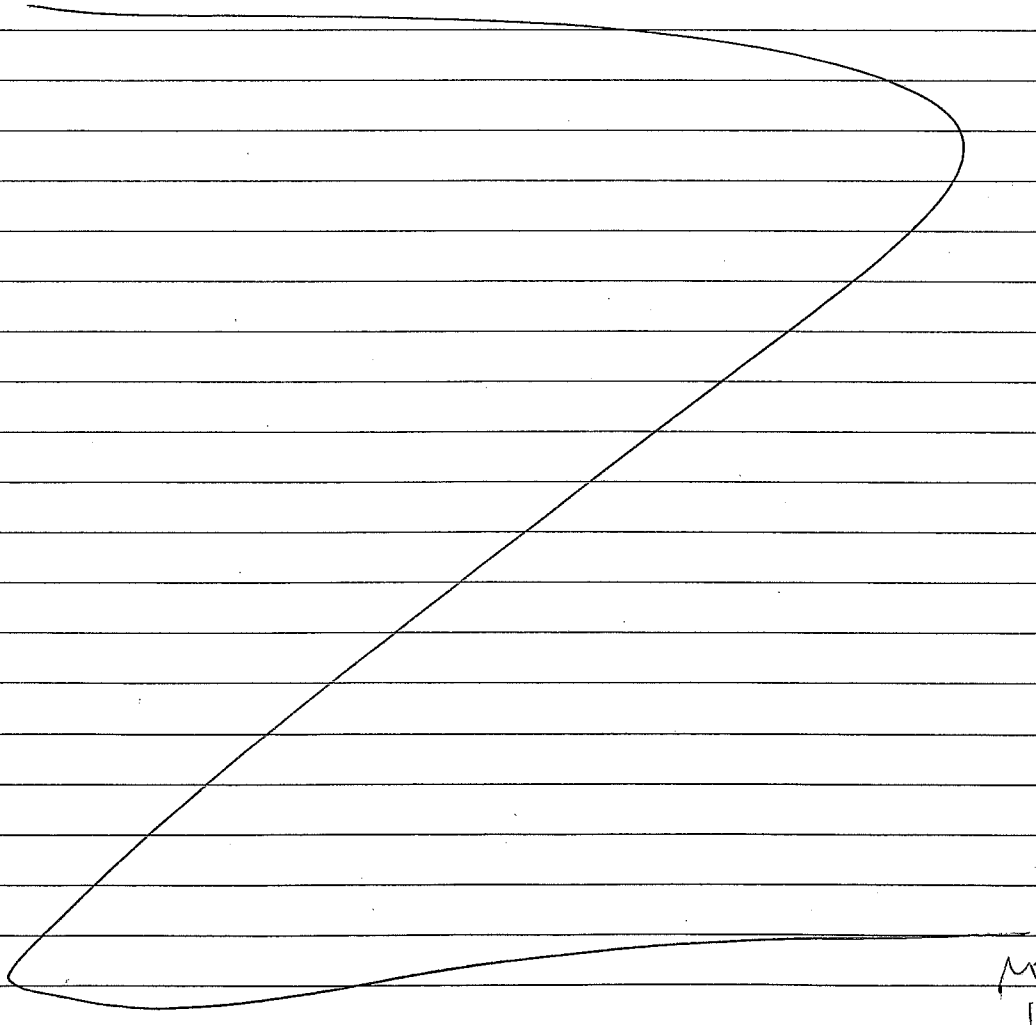
Standard ID: 1993-79
Project: Rad 170 H_2S LCS
Analyst: M. Skidmore
Preparation Date: 10/18/10
Expiration Date: 10/18/10

Solvent: HPLC H_2O
Solvent Lot #: DB270

Procedure/Comments:

A Rad 170 cartridge (lot: 1010) was placed in a 40 mL VOA vial. 10.0 mL of D.I. H_2O was aliquoted into the vial. 1.0 mL of H_2S gas (1476-1497; 1000ppm) was injected into the vial, into the H_2O. The solution was allowed to gently shake for 2 hours. Then 0.5 of the ferric-chloride-amine (1993-78) was added to the vial and capped immediately. The solution was allowed to sit for 30 minutes and the absorbance was measured at 665 nm.

MJS 10/18/10



MJS 10/18/10

Signed 10/18/10 Date Reviewed 10/22/10 Date

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-78
Project: Ferric Chloride-Amine Solution Rad 170
Analyst: M. Skidmore
Preparation Date: 10/18/10
Expiration Date: 10/18/10

Solvent: HPLC H_2O
Solvent Lot #: DB270

Procedure/Comments: Add 12.5 mL of ferric chloride solution (1993-77, exp 10/18/11) with 62.5 mL of amine solution (1993-76, exp 11/18/10).

MJS
10/18/10

Signed 10/18/10 Date

Reviewed 10/22/10 Date

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-76
Project: Rad 170 Amine Solution
Analyst: MSKidmore
Preparation Date: 10/18/10
Expiration Date: 11/18/10

Solvent: HPLC H2O
Solvent Lot #: DB 270

Procedure/Comments:

Sulfuric Acid Solution:

Slowly add 6.25 mL of concentrated sulfuric acid to 2.5 mL of D.I. H_2O, and let the solution cool. (sulfuric acid lot: 014285).

Amine Solution:

Dissolve 1.6875g of N,N-dimethyl-p-phenylendiammonium oxalate (located in ER1A; Lot: 63797PJ) in the above mentioned sulfuric acid solution. Dilute this solution to 250 mL with sulfuric acid-water 1:1 v/v. (This is roughly 120 mL H_2O + 120 mL sulfuric acid).

MJS 10/18/10

MJS 10/18/10

MSK 10/18/10 Signed Date

Fauzia 10/22/10 Reviewed Date

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-77
Project: Ferric Chloride Solution Rad 170
Analyst: M. Skidmore
Preparation Date: 10/18/10
Expiration Date: 10/18/11

Solvent: HPLC H_2O
Solvent Lot #: DB270

Procedure/Comments: Dissolve 125 g of ferric chloride hexahydrate (located in ERAC, lot: 732917) in 50 mL of H_2O,

MJS 10/18/10

Signed 10/18/10 Date

Reviewed 10/22/10 Date

Shipping/ Receiving Documents

Air Toxics LTD.
Laboratory Services Since 1989

180 Blue Ravine Road, Suite B
Folsom, CA 95630

Phone (916) 985-1000 FAX (916) 985-1020
Hours 8:00 A.M. to 6:00 P.M. Pacific

COMPANY: Environmental Health & Engineering, Inc.
ATTENTION: Mr. Brian Baker
FAX #: 781-247-4305
FROM: Sample Receiving
Workorder #: 1010262A
# of pages (Including Cover): 4

10/27/2010

Thank you for selecting Air Toxics Ltd. We have received your samples and have found discrepancies. In order to expedite analysis and reporting, please review the attached information for accuracy. Corrections can be faxed to **Ausha Scott at 916-985-1020.**
ATL will proceed with the analysis as specified on the Chain of Custody and Sample Login page.

In accordance with your company's contract, this account is required to have a PO that is fully executed by both parties which also covers the cost of the workorder before any data can be released. Please ensure that you have given all appropriate information to our Project Manager so that there will be no delay in reporting of the data you are requesting.

The following discrepancy has been observed:

Samples were received without documentation regarding collection date on the Chain of Custody. The sampling date of 9/28/10 you have provided by telephone/fax/e-mail will be used to determine the extent of hold time.

Your prompt response is appreciated.

1010262

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: 12 OCT 10

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: AIR TOXICS

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17314

The cost of this analysis will be covered by EH&E Purchase Order # 17314

For EH & E Data Coordinator - URGENT DATA ☑

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER: Time/Date/Vol.
01A	116171	AIR / PASSIVE	H_2S ANALYSIS	13D 18H 5M
02A	116172			
03A	116173			
04A	116174			
05A	116175			ØD
06A	116176			
	116177	AIR/PASSIVE	FORMALDEHYDE ANALYSIS	13D 18H 5M
	116178			
	116179			
	116180			
	116181			ØD

Special instructions:

☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES** ☑ Electronic transfer - datacoordinator@eheinc.com

☒ Additional report recipient bbaker@eheinc.com

Each signatory please return one copy of this form to the above address

Relinquished by: _____ of Environmental Health & Engineering, Inc. Date: 10/12/10

Received by: _____ of (company name) ATL Date: 10/13/10 09:00

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

CUSTODY SEAL INTACT?
Y N NONE TEMP 6.0°C

FedEx

Page 1 of 1

0017 of 0023

WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY

Air Toxics LTD.
Laboratory Services Since 1989

SAMPLE RECEIPT SUMMARY

WORKORDER 1010262A

Client

Mr. Brian Baker
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Sales Rep: TL

Phone

800-825-5343

Fax

781-247-4305

Date Promised: 10/26/10 11:59 pm
Date Completed:
Date Received: 10/13/10
PO#: 17314
Project#: 17314

Total $: $ 510.00
Logged By: AW

Fraction	Sample #	Analysis	Collected	Amount$
01A	116171	ATL Applications	NA	$80.00
02A	116172	ATL Applications	NA	$80.00
03A	116173	ATL Applications	NA	$80.00
04A	116174	ATL Applications	NA	$80.00
05A	116175	ATL Applications	NA	$80.00
06A	116176	ATL Applications	NA	$80.00

Misc. Charges eCVP (6) @ $5.00 each. $30.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: CPSC/14482

BILL TO: Accounts Payable
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Analysis Code: Other GC

TERMS:

Reporting Method: ATL Application #59 H2S-Radiello 170

Sample Discrepancy Report

Identification

Initiated By: AW **Project ID:**14482 **PM:** AS **Date:** 10/13/2010 **Discrepancy Type:** ☐ 1. ☒ 2. ☐ 3.

Workorder(s) affected:1010262A/B **Sample(s) affected:** All

1. Sample Receipt Discrepancies

Narration Not Required:

1.1. ☐ Sample container (cartridge/tube/VOA vial) was received broken, however sample was intact.
1.2. ☐ No brass cap on canister.
1.3. ☐ Date of Collection noted on first sample, but no arrow down to indicate all samples.

Notify Lab for further determination:

1.4. ☐ Tedlar bag received with minimal volume.

Initials: _____ Date: _____

Narration Required in Lab Narrative and Sample Confirmation:

1.5. ☐ COC was not filled out in ink.
1.6. ☐ COC improperly relinquished / received.
1.7. ☐ Sample tags / can numbers do not match the COC.
1.8. ☐ Sample date ☐ error / ☐ missing on COC but noted on sample tag (check one).
1.9. ☐ Custody Seal on the outside of the container was ☐ broken / ☐ improperly placed (check one).
1.10. ☐ ID-none on the sample Tag/Blank
1.11. ☐ Other (describe below).

Describe the Discrepancy: _____

2. Sample Receipt/Screening Discrepancies requiring PM notification

Document on Cover Page of Sample Receipt Confirmation and in Receiving Notes of Lab Narrative

If Section II. is filled out PM must be notified within 24 hrs of initiation

2.1. ☐ COC was not received with samples.
2.2. ☐ Analysis method(s) is ☐ not specified / ☐ incorrectly specified (check one) on the COC.
2.3. ☐ Incorrect sampling media / container for analysis requested.
2.4. ☐ Number of samples on the COC does not match the number of samples that were received.
2.5. ☐ Samples were received expired.
2.6. ☒ Sampling date (time for sulfur) is not documented for ☐ *some* / ☒ *any* samples (check one).
2.7. ☐ Sample received with amount of H_2O in the Tedlar Bag.
2.8. ☐ Sample cannot be analyzed. Container was ☐ received broken / ☐ leaking / ☐ flat / ☐ defective.
2.9. ☐ Tedlar bag / canister received emitting a strong odor; Sample ☐ can / ☐ cannot (check one) be analyzed.
2.10. ☐ Tedlar Bag for Sulfur analysis has metal fitting.
2.11. ☐ Environmental Supply Company valves
2.12. ☐ Sorbent samples-sampling volume was not provided
2.13. ☐ Flow controller used – canister samples received at ambient or under pressure.
2.14. ☐ Canister was at ambient pressure at time of pressurization and (check all that apply):
- ☐ Canister failed leak check on two manifolds,
- ☐ Canister valve was open,
- ☐ Brass nut was loose/not present.
- ☐ Sample can be analyzed
- ☐ Cannot be analyzed

2.15. ☐ Canister sample received with a vacuum difference >5.0"Hg between the receipt vac. And the final vac. reported on the COC, indicating loss of vacuum.
2.16. ☐ Canister sample received at >15"Hg (*not* identified as a Trip/Field Blank).
2.17. ☐ Canister Trip Blank received at low vacuum (< 25"Hg).
2.18. ☐ Sorbent Sample received outside method required temperature of 2°C to 6°C; ☐ ice / ☐ blue ice (check one) was present. A temp. Blank ☐ was / ☐ was not present (check one).
2.19. ☐ Other (describe below)

Initials: _____ **Date:** _____ **Notify Receiving:** ☐ **Notify PM:** ☐

Describe the Discrepancy: _____

3. Lab Discrepancies requiring Team Leader/PM notification

Document in Analytical Notes of Lab Narrative

If Section III. is filled out PM must be notified within 24 hrs of initiation

3.1. ☐ Tedlar Bag found to be leaking at the time of analysis; sample ☐ can / ☐ cannot (check one) be analyzed.

3.2. ☐ Tedlar Bag found to be flat/low volume; sample cannot be analyzed.

3.3. ☐ Sulfur samples received with insufficient time to analyze prior to expiration.

3.4. ☐ Canister found to be leaking at the time of analysis.

3.5. ☐ VOST tube saturated; bag dilution necessary.

3.6. ☐ Sample loss due to instrument malfunction / broken glassware.

3.7. ☐ Low/high surrogate recoveries noted in QC/sample(s) for extractable samples.

3.8. ☐ Reporting Limit was raised.

3.9. ☐ Post weight > Pre weight in field/lab Blank for PM10/TSP samples.

3.10. ☐ Other (describe below).

Initials: _____ **Date:** _____ **Notify Receiving:** ☐ **Notify PM:** ☐ _____

Team Lead Initials: _____ **Date:** _____

Describe the Discrepancy: _____

_____

_____

How Does this Affect Client: _____

_____

_____

Project Manager Use Only

Project Manager Notification ☒ **Section 2 Complete** ☐ **Section 3 Complete**

Action:

☐ It is not necessary to notify the client. Narrate the discrepancy in Receiving Notes/Analytical Notes of Lab Narrative.

PM Initials:_____ Date: _____

☒ Client notification required. See attached client contact / email, or comments below:

Client Notification:

PM Initials:AS Person notified: B.Baker Date: 10/13/2010

☐ Waiting for Client Reply

Comments: **Client emailed spreadsheet on 10/18**

_____

☐ Notify Lab Name: _____ Date: _____ **Notify Receiving:** ☐ _____

☐ **Additional notifications attached.**

Additional Comments:

_____

Other Records

Air Toxics LTD.
Laboratory Services Since 1989

Method : ATL Application #59 H2S-Radiello 170

CAS Number	Compound	Rpt. Limit (ug)
7783-06-4	Hydrogen Sulfide	1.2

DATA REVIEW CHECKLIST

Work Order #: 1010262A

A_1	A_2	W	T	R	Q	
☑	☐	☑	☐	☐	☐	Analysis/Reporting vs. Project Profile/SOP requirements checked (i.e. 100% Dups, J-Flag to MDL, etc)
		☑	☐	☐	☐	The final report has the correct reporting list, special units, and header info.
☑	☐	☑				Non-Standard sublist printed/verified, LOQ and LOD verified
		☑	☐	☐	☐	Lab Narrative is correct (proper method & description/Receiving & Analytical notes correct)
		☑	☐	☐	☐	Sample Discrepancy Report (SDR) is completed
☑	☐	☐	☐	☐	☐	Corrective Action issued - #
☐	☐	☐	☐		☐	Unusual circumstances have been documented in the notes section below

LUMEN *validation report present and initialed* ***CIRCLE (YES / NO)***

☑	☐	☑	☐	☐	☐	Lab Blank, CCV, LCS and DUP met QC criteria
☑	☐	☑	☐	☐	☐	Hold time is met for all samples
		☑	☐	☐	☐	Appropriate data qualifier flags are applied
		☑	☐	☐	☐	Manual integrations for samples and QC are properly documented
☑	☐	☑	☐		☐	Samples analyzed within the project or method specific clock
		☑	☐			Retention times have been verified
☑	☐	☑	☐		☐	Appropriate ICAL(s) included, %RSD Recalculation
		☑	☐		☐	At least one result per sample is verified against the target quant sheets/raw data
☑	☐	☑	☐		☐	Dilution factor correctly calculated (sample load volume, syringe and bag dilutions, can pressurization(s))
☑	☐	☑	☐			Correct amount of sample analyzed (i.e. sample not over-diluted)
		☑	☐			Spectra verified - documentation of spectral defense included (Section 5A of eCVP pkg)
		☐	☐			TICs resemble reference spectra
		☑	☐			TICs between duplicate samples are consistent
☑	☐	☑	☐	☐	☐	Checked samples for trends (i.e. Influent vs. Effluent, Field Dups, Field/Trip Blank, etc.)
☑	☐	☑	☐			Data for multiple analyses of sample(s) has been evaluated for comparability of results
		☑	☐			Special units for all samples in the final report are correctly calculated
		☑	☐			Manually entered results checked (i.e. TPH/NMOC)
☑	☐	☑				Chain of Custody verified for any special comments (i.e. different compounds/RLs, action levels)
		☑				Chain of Custody scanned correctly
					☐	Verify sample id's vs. chain of custody
☑	☐	☑				Date MDL(s) performed per instrument(s)
☑	☐	☑				Samples pressurized w/ appropriate gas (N_2 or He) ☐ Other (i.e. Tedlar bag, cartridge, sorbent)
☐	☐	☐				Final pressure consistent with canister size (6L vs. 1L)
☐	☐	☐				Verify receipt pressures
☑	☐	☐				Verify canister ID #'s
		☐	☐	☐		Final invoice amount correct (adjusted for TAT, Penalties, Re-issue Charges etc.)
		☑	☐	☐		Final PDF report reviewed for correctness

Notes: (to include: noting samples with QA/QC problems, Blanks with positive hits, narratives, etc.)

A/R: 19,805 minutes duration used for all QC's and Trip Blanks.

T/Q:

A_1/A_2 (Analytical Review/Date)	W/T (Write-up/Tech Review/Date)	R* (Report Review/Date)	Q (QA Review/Date)
A_1: 10/20/10	W: 10/20/10	R:	
A_2:	T:		

Note (1): Please check all the appropriate boxes. Indicate "NA" for any statement that does not apply.
Note (2): Report reviewer and write-up reviewer must be separate individuals for DoD & Client Specific projects.
* Report Review is completed for DoD & Client Specific projects only.